What Is Claimed Is:

1. An energy absorbing plunging constant velocity joint comprising:

an outer joint part having innerly a normal axial range, an extended axial range, and a plurality of outer bores circumferentially spaced between a plurality of longitudinally extending tracks, each track having a bottom spaced between two oppositely disposed longitudinal sidetracks;

an inner joint part disposed within said outer joint part having a plurality of spider sides circumferentially spaced between a plurality of trunions, each trunion having a top and an inner race;

a plurality of rollers having an inner bore mounted on said inner race of each said trunion, whereby angular and axial displacement occur between the inner joint and the outer joint; and

one or more energy absorption surfaces distal to the normal axial range and located in the extended axial range upon said outer joint part, wherein the energy absorption surface on the outer joint part interferes with said inner joint part or at least one of the plurality of rollers when said outer joint part is operated beyond said normal axial range in the extended axial range.

2. The joint according to claim 1, wherein one of the energy absorption surfaces is a circlip.

3. The joint according to claim 2, wherein the circlip is made from a deformable material.

4. The joint according to claim 3, wherein the deformable material is metal.

5. The joint according to claim 3, wherein the deformable material is plastic.

6. The joint according to claim 2, wherein the circlip is a ring.

7. The joint according to claim 1, wherein one of the energy absorption surfaces is a bottom surface located on one of said bottoms.

8. The joint according to claim 7, wherein the bottom surface has one or more inclination, a stepped inclination or a variable inclination.

9. The joint according to claim 7, wherein the bottom surface is made from the same material piece as the outer joint part.

10. The joint according to claim 1, wherein one of the energy absorption surfaces is a bore surface located on one of said outer bores.

11. The joint according to claim 10, wherein the bore surface has one or more inclination, a stepped inclination or a variable inclination.

12. The joint according to claim 10, wherein the bore surface is made from the same material piece as the outer joint part.

13. The joint according to claim 1, wherein one of the energy absorption surfaces is a track surface located on one of said side tracks.

14. The joint according to claim 13, wherein the track surface has one or more tapers or a stepped taper.

15. The joint according to claim 14, wherein the track surface is made from the same material piece as the outer joint part.

16. The joint according to claim 1, wherein the outer joint part further comprises a cylindrical open end located adjacent the extended axial range and distal to the normal axial range of the outer joint part and a grease cover sealingly attached to the cylindrical open end.

17. The joint according to claim 16, wherein the grease cover is displaceable when the joint has axial travel beyond the extended axial range.

18. The joint according to claim 1, wherein one or more of the energy absorption surfaces is machined, forged, or staked into the outer joint part in the extended axial range.

19. A propeller shaft assembly for a vehicle having an energy absorbing plunging constant velocity joint comprising:

an outer joint part having innerly a normal axial range, an extended axial range, and a plurality of outer bore surfaces circumferentially spaced between a plurality of longitudinally extending

tracks, each track having a bottom spaced between two oppositely disposed longitudinal sidetracks;

an inner joint part disposed within said outer joint part having a plurality of spider sides circumferentially spaced between a plurality of trunions, each trunion having a top and an inner race;

a plurality of rollers having an inner bore mounted on said inner race of each said trunion, whereby angular and axial displacement occur between the inner joint and the outer joint; and

one or more energy absorption surfaces distal to the normal axial range and located in the extended axial range upon said outer joint part, wherein the energy absorption surface on the outer joint part interferes with said inner joint part or at least one of the plurality of rollers when said outer joint part is operated beyond said normal axial range in the extended axial range;

a hollow shaft connected to said outer joint part; and

a connecting shaft connected to said inner joint part,

wherein the hollow shaft contains the connecting shaft, the inner joint part, and the rollers when said joint is operated beyond the extended axial range.

20. The joint according to claim 19, wherein the outer joint part further comprises a cylindrical open end located adjacent the extended axial range and distal to the normal axial range of the outer joint part and a grease cover sealingly attached to the cylindrical open end, wherein the grease cover is displaceable when the joint has axial travel beyond the extended axial range.